

State of Oregon

## Department of Environmental Quality

## Memorandum

**To:** Gene Foster, Zach Loboy, David Waltz

**Date:** September 27, 2011

**From:** Ryan Michie

**Section:** Watershed Management – WQ - HQ

**Subject:** Summary of proposed Mid-Coast category 4B elements.

### 4b Elements

#### 1. Identification of segment and statement of problem causing the impairment;

##### a. Segment Description

North Fork Siuslaw and Big Elk Creek watershed and associated watershed streams.

##### b. Impairment and pollutant causing impairment

Elk Creek and the six waterbodies in the North Fork Siuslaw were listed in 1998 for excessive sedimentation based on USFS watershed assessments indicating beneficial use impairment. The watershed assessments documented gravel spawning beds within excessive fining. ODEQ will also provide additional biological impairment data.

##### c. Sources of pollutant causing impairment

The USFS watershed analysis indicated landslides, roads, and sediment from past forest harvest activities were the potential sources. The riparian condition in some agricultural areas is also a potential source along with lack of wood being a causative factor.

The 4b analysis will provide additional sediment source analysis in the following ways:

- A landslides inventory will be conducted using LiDAR data.
- Landslide related sediment production/delivery will be calculated with the LAPSUS model. Both natural and management related conditions will be evaluated.
- Overland sediment production /delivery from land management activities will be calculated with the LAPSUS model. Both natural and management related conditions will be evaluated.

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- Road related sediment production and delivery will be calculated with the GRAIP model in the North Fork Siuslaw. In Big Elk Creek we are considering a road inventory and condition assessment procedure for identification of road related sediment sources.
- An inventory of riparian/bank conditions derived from LiDAR and field observations.
- An inventory of problem roads and culverts in the North Fork Siuslaw.

## 2. Description of pollution controls and how they will achieve water quality standards;

### a. Water quality target

The proposed water quality target will be a combination of a biological target (no more than 15% loss of reference site taxa) and a water quality target (percent fines or sands/fines) inferred from the biological data and reference sites.

The targets will be based on data already collected in the Mid-Coast/Coastal area and will discern between erodible and resistant geologies.

### b. Point and nonpoint loadings to meet WQS

- c. The 4b plan will quantify watershed, sector and/or management loads at a natural condition and/or at the agreed management condition. Implementation will be focused on specific management measures such as number of cross drains to be repaired, time periods when hauling is prohibited, locations or condition based criteria for leaving trees, etc.

### d. Controls

The current controls or additional controls needed to achieve the water quality standard will be based on the finding of the modeling/data analysis, roads surveys, and literature review of best practices.

### e. Description of requirements under which pollution controls will be implemented

For landslide hazard areas where aquatic resources are identified to be at risk of excessive sediment, the plan will describe the location and/or conditions where certain management measures will be implemented.

For problem roads, a list of control actions appropriate for remediating the identified problem will be identified. In the North Fork Siuslaw the GRAIP model will provide the rationale for identified actions. In the Big Elk Creek and elsewhere the rationale for action will be based on the results of a road survey or condition assessment. Once a problem situation is identified, a specific control action is taken to remedy the problem (e.g., upgrade to meet FPA if not currently

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meeting). What constitutes a “problem situation” and the associated “control action” will be defined in the plan. The timing, scope, and how surveys occur will be outlined in the plan.

The plan may include criteria and rationale for ranking or assigning risk levels as a way to prioritize where and when control actions will occur.

**Authority:** ODEQ will provide reasonable assurance the plan will be implemented by entering into an MOU or other legal agreement with the parties involved. This may include issuing the plan as an order. If there is insufficient support for the plan needed to meet water quality standards DEQ will convert the plan to a TMDL. ODEQ and Oregon Department of Forestry (ODF) are also considering rule changes and/or additional department orders requiring road inventory and repair. These actions will provide additional authority if they move forward.

**Question for EPA:** Currently there is not a road condition inventory in the Big Elk Creek watershed. We are considering collecting that information as part of the plan. Is a 4b plan approvable if the plan provides a schedule of road surveys, a protocol for problem identification, and the timeline and criteria for the appropriate control actions

**3. An estimate or projection of the time when water quality standards will be met;**

An estimate of the timeline for implementation actions will be included. Changes in sediment water quality will likely be on an extended timeline. Regular evaluations of the in-stream conditions compared to the target benchmarks will be conducted as part of the monitoring plan

**4. A schedule for implementing pollution controls;**

A schedule and prioritization of implementation actions will be included

**5. A monitoring plan to track effectiveness of pollution controls;**

Two types of monitoring have been evaluated and will be proposed:

- Reporting and tracking of management measures or actions implemented in order to track progress;
- monitoring and sampling of biological and instream sediment conditions to track progress and for use in refining the water quality target if necessary.

**6. Commitment to revise controls, as necessary.**

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The plan will include an adaptive management process to revise controls, source loadings, or water quality targets. The process will involve State of Oregon agencies in coordination with landowners that enter into agreements. Monitoring results will partly provide the basis for future revisions of benchmarks or control actions, as well as refining source information.

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